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EVALUATION OF ILLINOIS STREAM SEDIMENT DATA: 1974-1980

by

Martin H. Kelly and Robert L. Hite

MONITORING UNIT

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
STATE OF ILLINOIS
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D. Mean concentrations of organic parameters, arsenic and metals, and organochlorine compounds in stream sediments at background sites were computed and contrasted with constituent means for all sampling locations (Table 6 , page 24).

9. STREAM SEDIMENT CLASSIFICATION: Based on standard deviations from background means, a five tier Classification of Illinois Stream Sediments was developed for constituents for which adequate data was available.

CLASSIFICATION OF ILLINOIS STREAM SEDIMENTS

NUTRIENTS AND HEAVY METALS: Ranges of concentrations displayed and resultant groupings are based on one, two, four and eight standard deviations from background mean. Unless otherwise noted concentrations are in mg/kg sediment dry weight.

PARAMETER	NON-ELEVATED	SLIGHTLY ELEVATED	ELEVATED	HIGHLY ELEVATED	EXTREME
COD	<90000	≥90000	≥132000	≥215000	≥380000
Total Kjeldahl Nitrogen	<2300	≥2300	≥3200	≥5100	≥8800
Total Volatile Solids (%)	<6.5	≥6.5	≥8.8	≥13	≥22
Total Phosphorus	<80	≥80	≥1100	≥1700	≥3000
Arsenic	<8.0	≥8.0	≥11	≥17	≥28
Chromium	<16	≥16	≥23	≥38	≥60
Copper	<38	≥38	≥60	≥100	≥200
Iron	<18000	≥18000	≥23000	≥32000	≥50000
Lead	<28	≥28	≥38	≥60	≥100
Manganese	<1300	≥1300	≥1800	≥2800	≥5000
Mercury	<0.07	≥0.07	≥0.10	≥0.17	≥0.30
Zinc	<80	≥80	≥100	≥170	≥300

CADMIUM AND ORGANOCHLORINE COMPOUNDS: Ranges of concentrations and resultant groupings are based on 50, 65, 80 and 95 percent distributions for all samples. Cadmium concentrations are in mg/kg and organochlorine concentrations are in ug/kg sediment dry weight.

Cadmium	<0.5	≥0.5	≥1.0	≥2.0	≥20.0
Chlordane	<5	≥5	≥6	≥10	≥40
Sum DDT	<6.0	≥6.0	≥10	≥35	≥200
Dieldrin	<3.5	≥3.5	≥6	≥10	≥25
Heptachlor Epoxide	<1.0	≥1.0	≥1.5	≥3	≥9
PCBs	<10	≥20	≥50	≥200	≥1500